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 Richard V. Folea Jr.  
 8080 Miliford Rd  
 Gainesville, GA 30506

EXAMINER

BRITT, CYNTHIA H

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/073,830

Applicant(s)

FOLEA, RICHARD V.

Examiner

Cynthia Britt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13,14 and 17-24 is/are rejected.
- 7) ☒ Claim(s) 15,16,21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 2/8/05.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

The amendment filed 10/18/04 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amendments include references to 'target programs', as this term was not used in the original disclosure 'target programs' is considered new matter. The amendments to the original disclosure, page 1 line 4, page 3 paragraph b (second occurrence), page 4 first paragraph 1 line 3, page 4 paragraph 2 line 7, page 11 3<sup>rd</sup> bullet, and the Abstract (page 17 line 2), each refer to 'target programs' which is considered new matter. New claim 17 also includes this new matter.

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

The examiner would like to point out that it is improper to introduce new matter into the specification and claims after the filing date. The present invention should be claimed on the basis of the merits of the disclosure of the invention and additional negative limitations should not be necessary to claim the function or the merits of the invention.

Appropriate correction is required.

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Specification***

The disclosure is objected to because of the following informalities: The examiner can see no reason for there to be 2 occurrences of 'b' on page 3 and requests the 'a'-'g' "Objects and Advantages" section be renumbered to 'a'-'h'.

The disclosure is objected to because of the following informalities: page 4, 1<sup>st</sup> paragraph line 4 "switchn" should be "switch".

Appropriate correction is required in response to this office action.

### ***Response to Arguments***

On page 6 of *Amendment A* applicant argues with respect to the independent claims; "(1)Both references rely on target programs, test executives and/or test vectors to operate. The present invention does not, per Claims 15, 16 and 17." Although the references rely on target programs, test executives, and/or test vectors to operate, these limitations are not in the independent claims and are not relevant to the argument with respect to these claims. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., target programs, test executives, and/or test vectors) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 6 of *Amendment A* applicant argues with respect to the independent claims; “(2) Mulrooney relies on downloadable target programs to provide real-time feedback of parameters of interest to the user, it does not provide the boundary scan data to the user in real-time or otherwise.” However, Mulrooney teaches “the host computer monitors the real-time operation of a target device having a scan chain by identifying devices connected to the scan chain, downloading from the host computer to the target device, target programs associated with the identified devices; synchronously running all of the target programs; and transmitting results data, compiled as a result of running the target programs, in real-time to the host computer without interrupting the operation of the target device ( column 2 lines 38-50).”

On page 6 of *Amendment A* applicant argues with respect to the independent claims; “(3) JTAG Visualizer provides color-coded responses of information derived from the boundary scan data (faults, etc) and the user provided netlists and test vectors. The present invention provides color-coded representations of the raw boundary scan data without the need for test vectors or netlists.” In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., The present invention provides color-coded representations of the raw boundary scan data without the need for test vectors or netlists) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 7 of *Amendment A* applicant argues with respect to the independent claims; "(5) The novel features of Claims 1 (13) and 12 (24) produce new and unexpected results and hence are unobvious and patentable over these references. The ability to directly monitor and control the raw boundary scan data via a graphical user interface is not suggested or taught by any prior art reference." It is unclear what the new and unexpected results of having the ability to directly monitor and control the raw boundary scan data via a graphical user interface would be.

On page 7 of *Amendment A* applicant argues with respect to the independent claims; "(9) Even if combined, the references would not meet the claims of the present invention. Specifically:

(a) Neither prior art operates without test vectors, test executives or target programs per Claims 13, 14, 15, 16, and 17.

(b) Neither invention teaches the generation of virtual DUTS automatically built from BSDL files per Claim 24.

(c) Neither invention teaches the use of graphical controls to view and control the raw boundary scan data per Claims 19, 20, 21, 22, and 23.

(d) Neither invention teaches or suggests using their methods to display the real-time raw boundary scan data of Claim 18." In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., segments a, b, c, and d) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re*

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*Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The examiner would like to point out to applicant that arguments on the rejection of the independent claims must rely only on the content of the independent claims.

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to a person having ordinary skill in the art at the time this invention was made to have used the full graphical interpretation of boundary scan operations of JTAG Technologies with the method of Mulrooney. This would have been obvious to a person having ordinary skill in the art at the time this invention was made as suggested

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by Mulrooney (column 4 lines 40-50) in order for the user to more easily understand how a test is progressing. JTAG Technologies teaches full graphical interpretation of boundary-scan operations and results in which the user can cross-reference between representations of the target product, zooming in on specific areas of interest. The system allows quick visual distinction among fault types and net/circuit classes such as test access port signal, boundary-scan nets, clusters, and other types of circuits. (Page 1 paragraphs 3 and 5)

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "target programs" as described above is considered new matter in this application.

### ***Allowable Subject Matter***

Claims 15, 16, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



### ***Claim Objections***

Claim 21 is objected to because of the following informalities: Claim 21 cannot depend on a cancelled claim (1). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 13, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,279,123 Mulrooney in view of "JTAG Visualizer Makes Boundary Scan Visible Powerful Tool at DFT Assessment and Repair f PCB's" JTAG Technologies Press information release date November 6, 2001.

As per claims 13 and 24, Mulrooney substantially teaches the claimed method of using a host computer monitors the real-time operation of a target device having a scan chain by identifying devices connected to the scan chain, downloading from the host computer to the target device, target programs associated with the identified devices; synchronously running all of the target programs; and transmitting results data, compiled as a result of running the target programs, in real-time to the host computer without interrupting the operation of the target device (column 2 lines 38-50, figure 2). Not explicitly disclosed is the user interaction with the boundary scan elements.

However, in an analogous art, JTAG Technologies disclose a device in which "full graphical interpretation of boundary scan operations" can be graphically displayed with results and user accessibility (page 1 paragraphs 2 and 3). Therefore it would have been obvious to a person having ordinary skill in the art at the time this invention was made to have used the full graphical interpretation of boundary scan operations of JTAG Technologies with the method of Mulrooney. This would have been obvious to a person having ordinary skill in the art at the time this invention was made as suggested by Mulrooney (column 4 lines 40-50) in order for the user to more easily understand how a test is progressing.

As per claim 14, JTAG Technologies teach the capability of varying the graphics and colors of the displayed devices (page 1, paragraph 2). JTAG Technologies teaches full graphical interpretation of boundary-scan operations and results in which the user can cross-reference between representations of the target product, zooming in on specific areas of interest. (Page 1 paragraph 3)

As per claim 18, Mulrooney teaches updating test status of the running tests (column 4 lines 34-39).

As per claims 19, 20, and 23, Mulrooney teaches a GUI which the user can see a displayed indication of current testing processes (column 3 line 36-52). JTAG Technologies teaches full graphical interpretation of boundary-scan operations and results in which the user can cross-reference between representations of the target product, zooming in on specific areas of interest. (Page 1 paragraph 3)

As per claims 21 and 22, Mulrooney teaches that the command line parameters may be input from the configuration file or can be directly input from the keyboard of the host computer using the host control panel GUI, if the host user wishes to modify the diagnostics specified by the configuration file. (Column 4 lines 46-50 FIG. 2)

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Britt whose telephone number is 571-272-3815. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Cynthia Britt  
Examiner  
Art Unit 2133

  
Guy J. Lamarre  
Primary Examiner